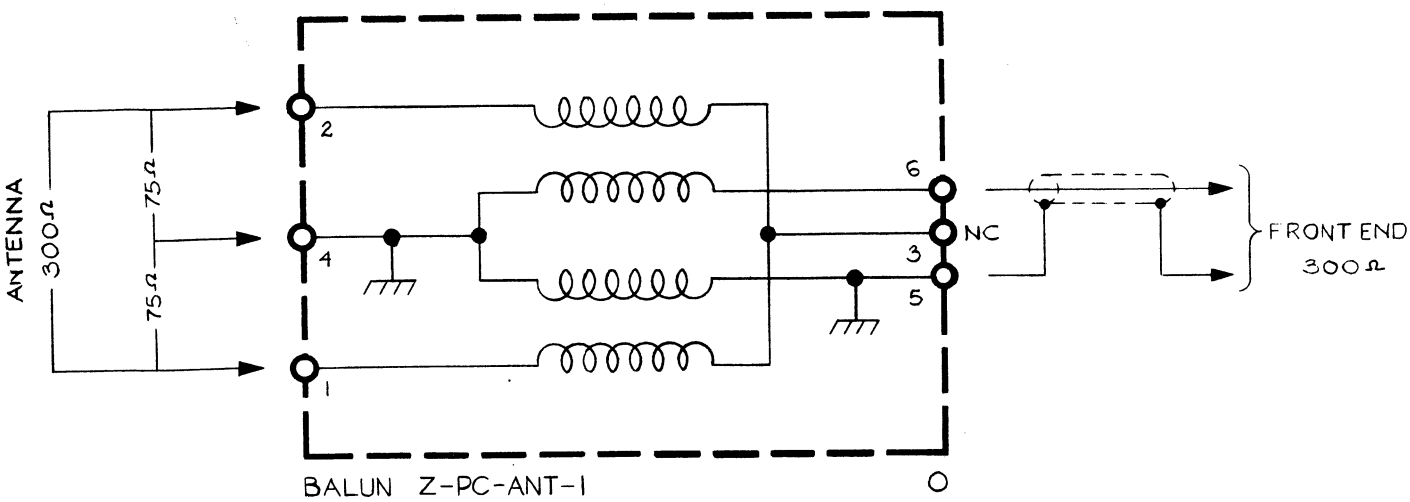
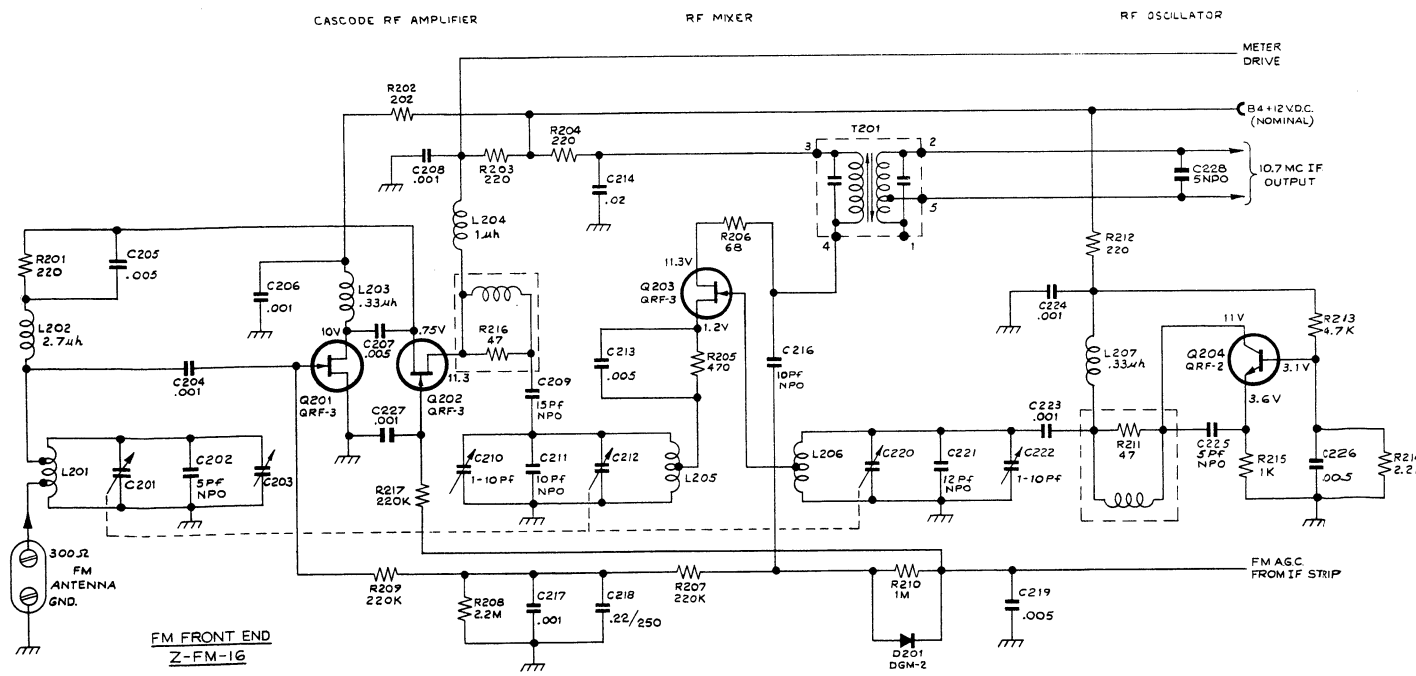
Scott . . . where innovation is a tradition

SCOTT®

SERVICE BULLETIN FOR MODEL 312D





HIGHEST SERIES NO.

R217
C228
L207
D201
T201
Q204

NOTES

1. UNLESS OTHERWISE SPECIFIED: RESISTANCE IN OHMS ±10% CAPACITANCE IN MFD'S, RESISTORS ¼ WATT.
2. INDICATED SUPPLY VOLTAGES MAY VARY ABOVE OR BELOW NOMINAL VOLTAGE SHOWN FROM MODEL TO MODEL.
3. D C VOLTAGES ±15% MEASURED WITH 20KΩ/V VOM.
4. ARROW-HEADS INDICATE MAIN SIGNAL PATH.

NOTES:

Q201, Q202, Q203 TRANSISTORS ARE SELECTED BY GROUP.

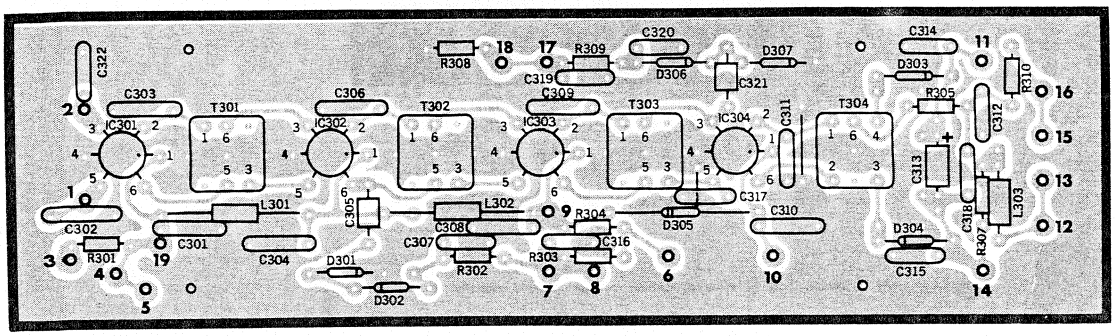
GROUP	Q201	Q202	Q203	APPROX. RELATIVE GAIN
1	YELLOW	GREEN	ORANGE	
2	GREEN	BLUE	YELLOW	FREQUENTLY HIGHEST
3	ORANGE	YELLOW	RED	FREQUENTLY LOWEST

FET BASE DIAGRAMS

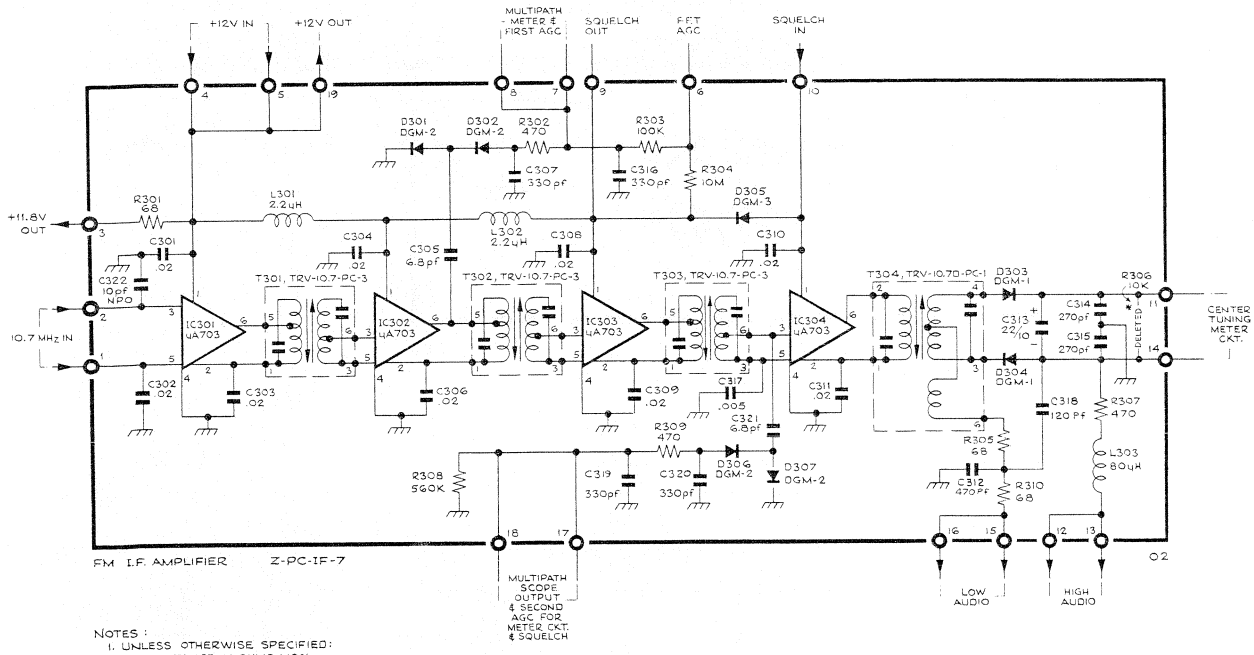
1 = SOURCE 2 = DRAIN 3 = GATE 4 = CASE

© Copyright H. H. Scott, Inc. 1968

IC301, IC302, IC303, IC304 - QμA-703



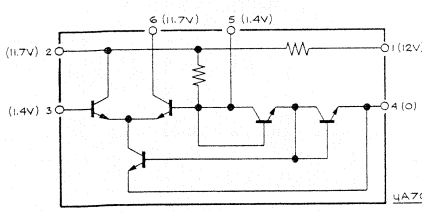
FM IF AMPLIFIER Z-PC-IF-7 3



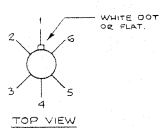
NOTES :
1. UNLESS OTHERWISE SPECIFIED:
RESISTANCE IN OHMS ±10%.
CAPACITANCE IN MFD'S.
RESISTORS 1/4 WATT.
VOLTS DC ±5% MEASURED WITH 20KΩ/V.V.O.M.
2. ARROW — HEADS INDICATE MAIN SIGNAL PATH.
3. * R306, 10K, 1/2 W RESISTOR DELETED AND REPLACED WITH TWO EXTERNAL 5.2K, 1% RESISTORS.

HIGHEST SERIES NUMBERS

C322	D307	R310	L303
T304	IC304		

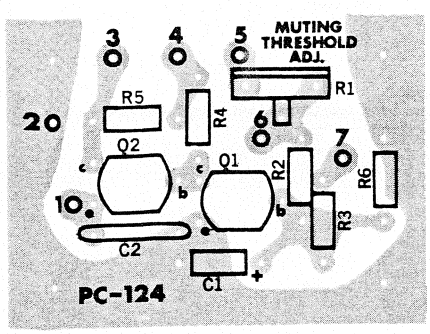


μA703 CIRCUIT DIAGRAM

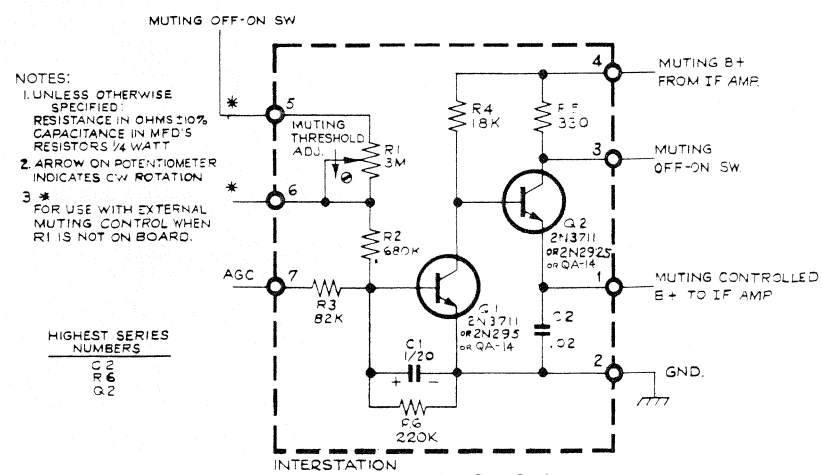


TOP VIEW

Q1, Q2 - 2N2925 or 2N3711 or QA-14



INTERSTATION NOISE MUTING Z-PC-NS-4 1

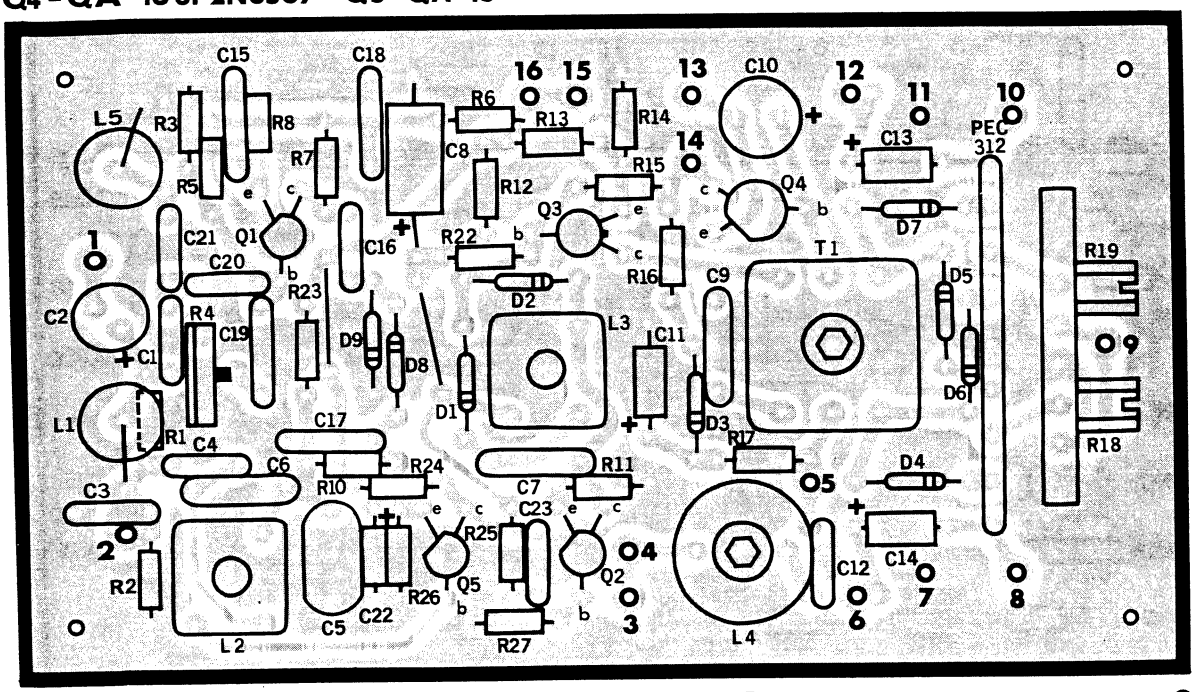


NOTES:
1. UNLESS OTHERWISE SPECIFIED:
RESISTANCE IN OHMS ±10%
CAPACITANCE IN MFD'S
RESISTORS 1/4 WATT
2. ARROW ON POTENTIOMETER INDICATES CW ROTATION
3. * FOR USE WITH EXTERNAL MUTING CONTROL WHEN R1 IS NOT ON BOARD.

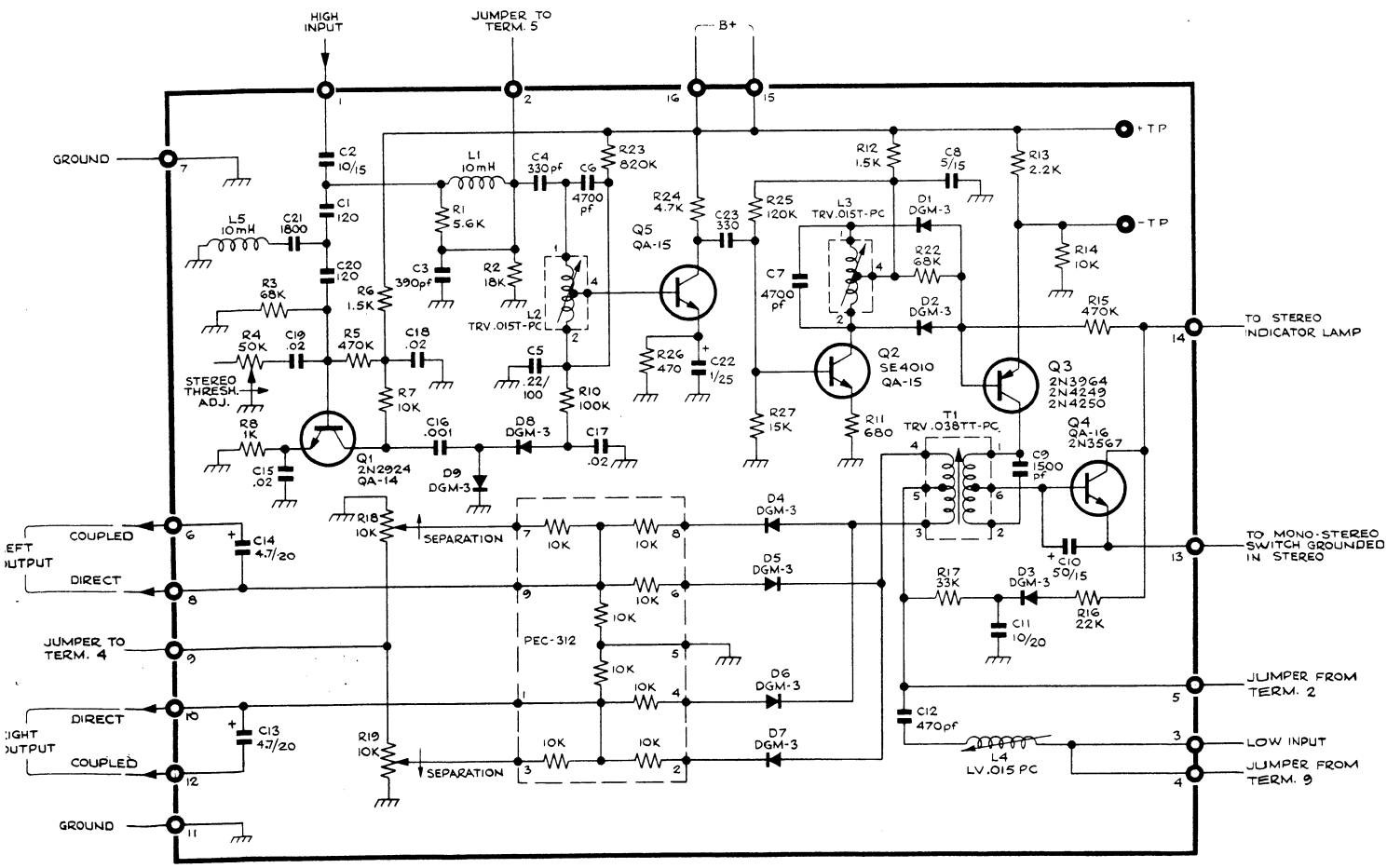
HIGHEST SERIES NUMBERS

Q2
R6
Q2

Q1 - 2N2924 or QA-14 Q2 - SE4010 or QA-15
Q3 - 2N3964, 2N4249 or 2N4250
Q4 - QA-16 or 2N3567 Q5 - QA-15



AUTOMATIC MULTIPLEX DEMODULATOR Z-PC-MX-15



AUTOMATIC MULTIPLEX DEMODULATOR Z-PC-MX-15

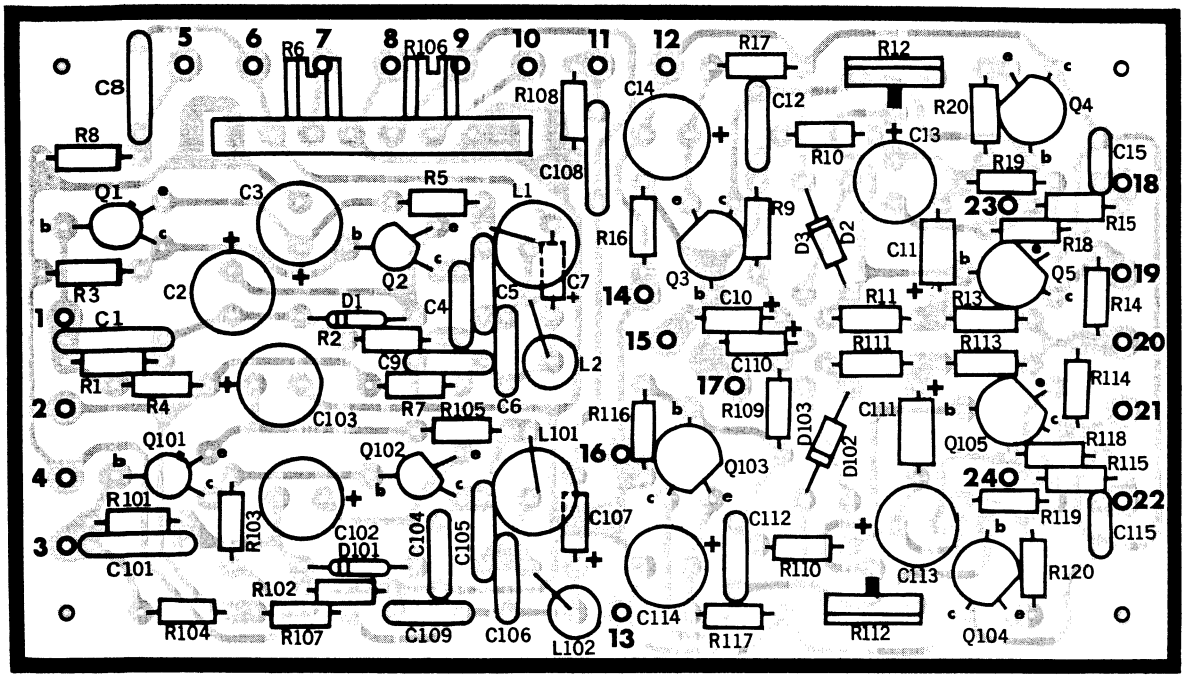
NOTES:
1. UNLESS OTHERWISE SPECIFIED: RESISTANCE IN OHMS ±10%, CAPACITANCE IN MFD'S, RESISTORS 1/4 WATT.
2. ARROWS ON POTENTIOMETERS INDICATE CW ROTATION.

Q1, Q101 - S1990 (FAIRCHILD)

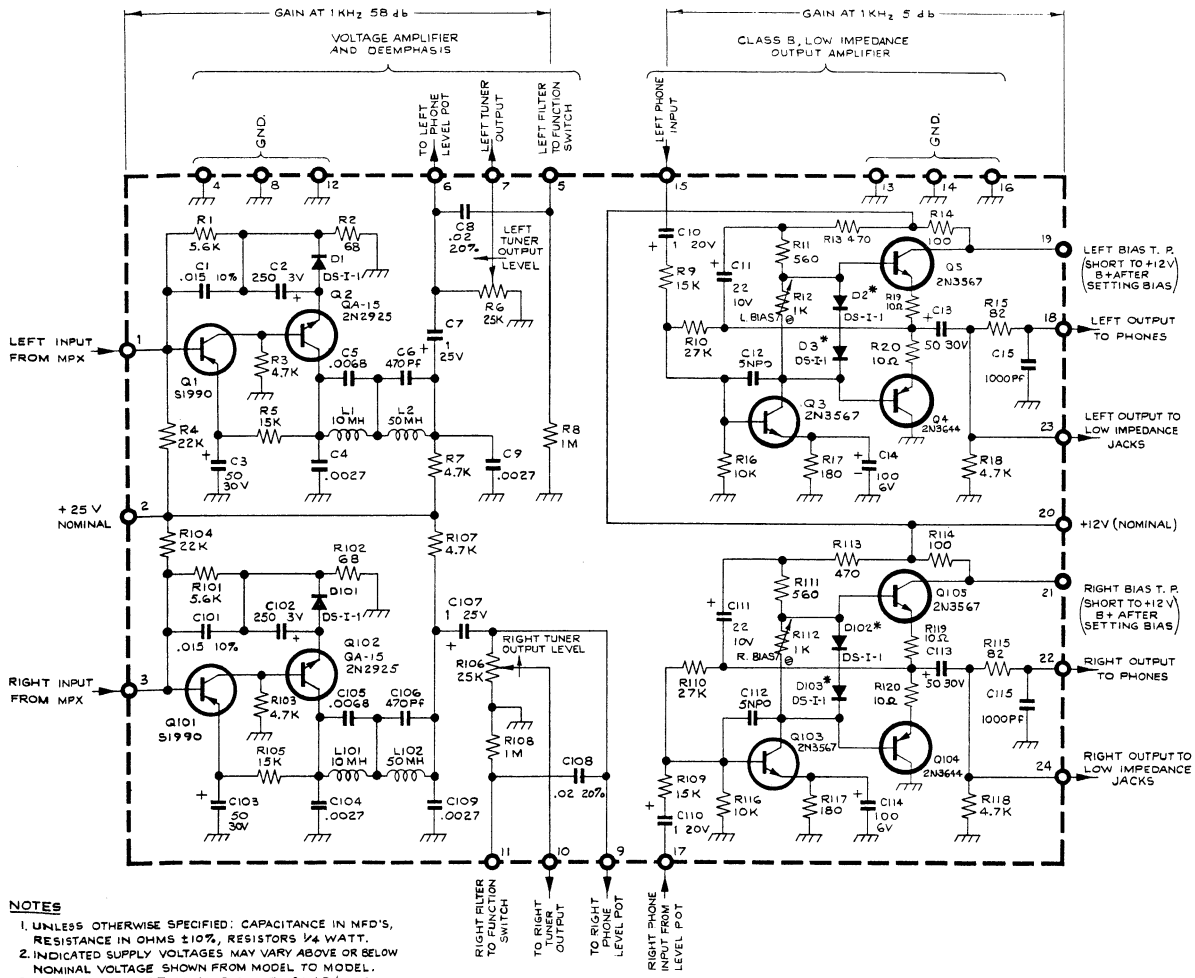
Q2, Q102 - 2N2925, QA-15

Q3, Q103, Q5, Q105 - 2N3567

Q4, Q104 - 2N3644



OUTPUT Z-PC-O-4 **1**

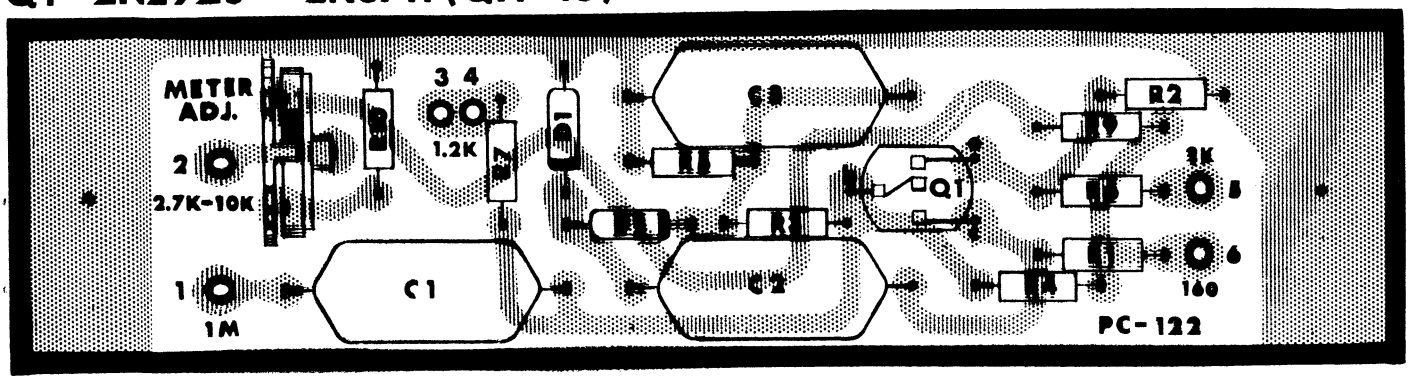

GAIN AT 1 KHz 58 db
VOLTAGE AMPLIFIER AND DEEMPHASIS
GAIN AT 1 KHz 5 db
CLASS B, LOW IMPEDANCE OUTPUT AMPLIFIER
GND.
TO LEFT PHONE LEVEL POT
LEFT TUNER OUTPUT
LEFT FILTER TO FUNCTION SWITCH
LEFT PHONE INPUT
LEFT INPUT FROM MPX
RIGHT INPUT FROM MPX
+25 V NOMINAL
LEFT TUNER OUTPUT LEVEL
RIGHT TUNER OUTPUT LEVEL
LEFT BIAS T. P. (SHORT TO +12V B+ AFTER SETTING BIAS)
LEFT OUTPUT TO PHONES
LEFT OUTPUT TO LOW IMPEDANCE JACKS
+12V (NOMINAL)
RIGHT BIAS T. P. (SHORT TO +12V B+ AFTER SETTING BIAS)
RIGHT OUTPUT TO PHONES
RIGHT OUTPUT TO LOW IMPEDANCE JACKS
R. BIAS
RIGHT FILTER TO FUNCTION SWITCH
TO RIGHT TUNER OUTPUT
TO RIGHT PHONE LEVEL POT
RIGHT PHONE INPUT FROM LEVEL POT

NOTES

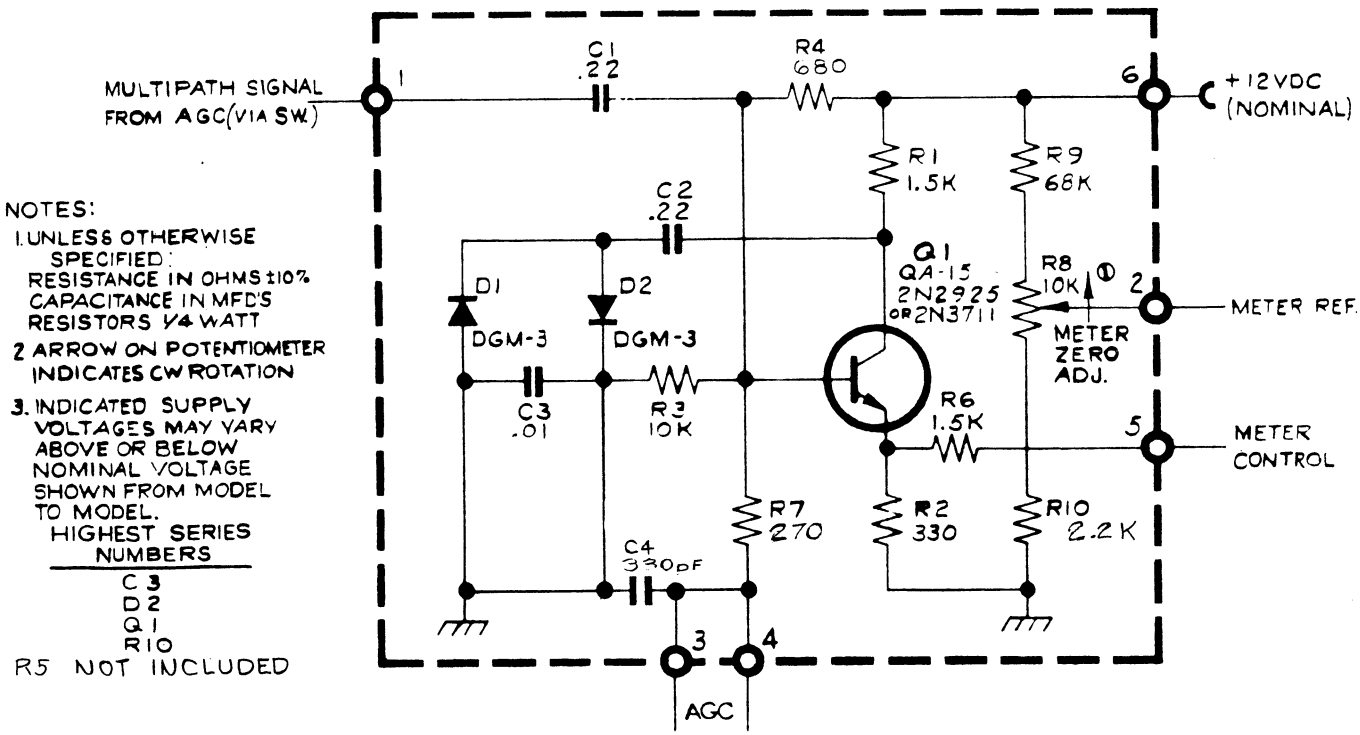
1. UNLESS OTHERWISE SPECIFIED: CAPACITANCE IN MFD'S, RESISTANCE IN OHMS ±10%, RESISTORS ¼ WATT.
2. INDICATED SUPPLY VOLTAGES MAY VARY ABOVE OR BELOW NOMINAL VOLTAGE SHOWN FROM MODEL TO MODEL.
3. D C VOLTAGES ±15% MEASURED WITH 20KΩ/V VOM.
4. ARROW HEADS INDICATE MAIN SIGNAL PATH.

* EACH PAIR OF DS-I-1 DIODES, D2, D3 AND D102, D103 MAY BE REPLACED BY ONE DST-2

Q1 - 2N2925 or 2N3711 (QA-15)



MULTIPATH INDICATOR Z-PC-MI-2 00



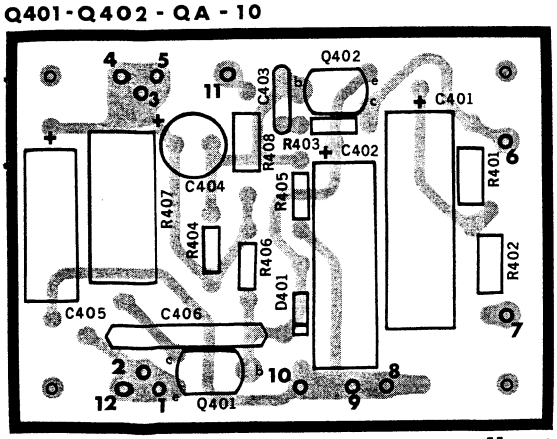
NOTES:
1. UNLESS OTHERWISE SPECIFIED:
   RESISTANCE IN OHMS ±10%
   CAPACITANCE IN MFD'S
   RESISTORS 1/4 WATT
2. ARROW ON POTENTIOMETER INDICATES CW ROTATION
3. INDICATED SUPPLY VOLTAGES MAY VARY ABOVE OR BELOW NOMINAL VOLTAGE SHOWN FROM MODEL TO MODEL.

HIGHEST SERIES NUMBERS
C3
D2
Q1
R10

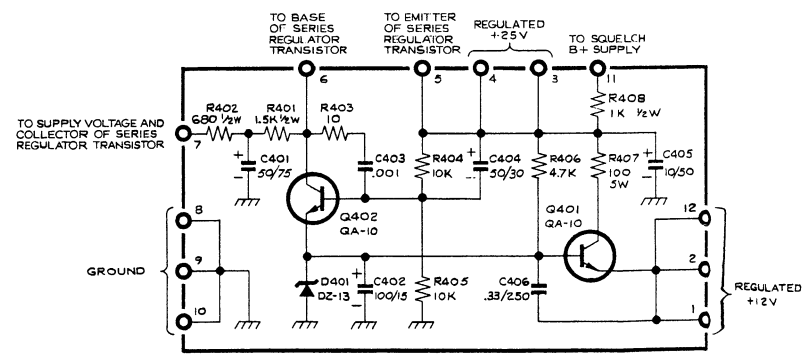
R5 NOT INCLUDED

MULTIPATH INDICATOR Z-PC-MI-2 01

Q401-Q402 - QA-10

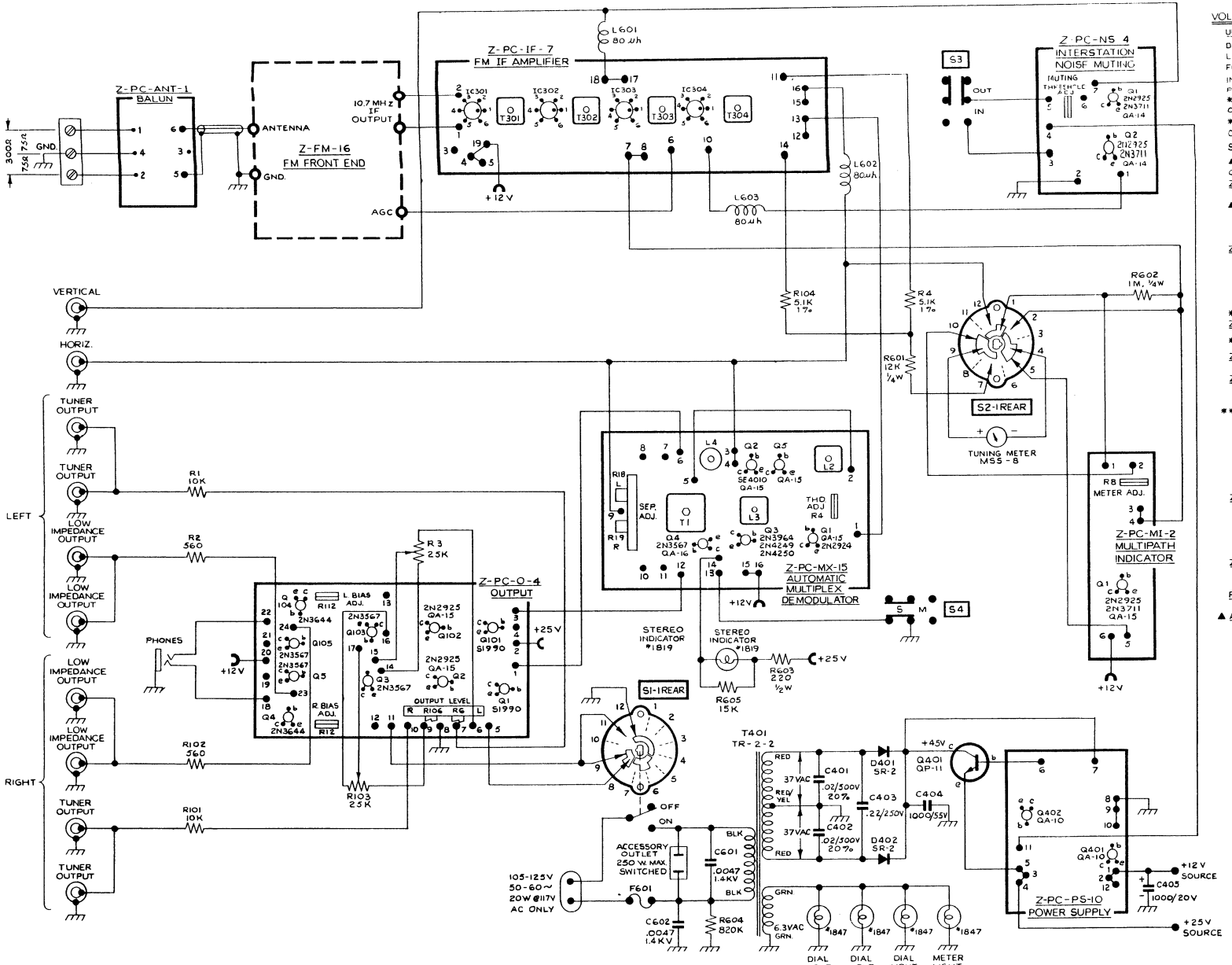


POWER SUPPLY Z-PC-PS-11 0



POWER SUPPLY Z-PC-PS-10 0

NOTES:
UNLESS OTHERWISE SPECIFIED
1. RESISTANCE IN OHMS ±10%. RESISTORS ¼ WATT.
   CAPAITANCE IN MFD'S.



VOLTAGES

UNLESS OTHERWISE SPECIFIED: ALL VOLTAGES POSITIVE DC ±15% MEASURED WITH 20K Ω/V VOM AND 117 VAC LINE 300 Ω LOAD ON ANTENNA TERMINALS, TUNER OF STATION AND FUNCTION SWITCH IN NORMAL POSITION. SELECTOR SWITCH IN MONO MUTING OFF, METER SWITCH IN SIGNAL STRENGTH POSITION.

* VOLTAGES MEASURED UNDER SAME CONDITIONS AS ABOVE, ONLY MODE SWITCH IN MONO WITH MUTING ON.

** VOLTAGES MEASURED UNDER SAME CONDITIONS AS ABOVE. ONLY MODE SWITCH IN "STEREO" AND MUTING OFF" WITH STEREO SIGNAL FED INTO TUNER.

▲ VOLTAGES MEASURED UNDER SAME CONDITIONS AS ABOVE, ONLY WITH DC VTVM.

		GATE	DRAIN	SOURCE
Z-FM-16				
	Q201	.2 V	10 V	0 V
▲	Q202	1 V	.75 V	11.3 V
	Q203	0 V	11.3 V	1.2 V
		g	b	c
	Q204	3.6 V	3.1 V	11.0 V

Z-PC-IF-7 LEAD*	1	2	3	4	5	6
IC301	12 V	11.6 V	1.6 V	0 V	1.6 V	11.5 V
IC302	12 V	11.6 V	1.6 V	0 V	1.6 V	11.5 V
IC303	12 V	11.6 V	1.6 V	0 V	1.6 V	11.5 V
IC304	11 V	10.5 V	1.5 V	0 V	1.5 V	11 V
* IC304	.9 V	1 V	1 V	0 V	1 V	11 V

Z-PC-NS-4		g	b	c
*	Q1	1.1 V	.35 V	27 V
*	Q2	0 V	.65 V	.3 V
Z-PC-MI-2				
	Q1	1.5 V	2.1 V	4.6 V

Z-PC-MX-15			
	Q1	.5 V	1.1 V	6 V
	Q2	.5 V	1.1 V	10.6 V
**	Q3	.7 V	8 V	9 V
**	Q4	0 V	.7 V	.3 V
**	Q5	.5 V	1.1 V	7 V
	Q1	.5 V	1.1 V	6 V
	Q2	.5 V	1.1 V	10.6 V
	Q3	.3 V	10.7 V	9.8 V
	Q4	.7 V	0 V	27 V
	Q5	.5 V	1.1 V	10.6 V

Z-PC-O-4			
	Q1, Q101	6.5 V	6 V	1.5 V
	Q2, Q102	.9 V	1.5 V	11.4 V
	Q3, Q103	.8 V	1.5 V	6.5 V
	Q4, Q104	7 V	6.5 V	0 V
	Q5, Q105	7 V	7.6 V	12 V

Z-PC-PS-10			
	Q401	12.5 V	13 V	20 V
	Q402	13 V	13.5 V	27 V
POWER TRANSISTOR				
	Q401	28 V	27.5 V	45 V

▲ AGC VOLTAGE (Z-PC-IF-7)
TERM. 6 −.5V TO −1.0V
TERM. 18 −2V TO −2.5V
1,000 μV SIGNAL FED TO ANTENNA TERMINALS WITH UNIT OPERATING.

NOTES:
1. UNLESS OTHERWISE SPECIFIED: RESISTANCE IN OHMS ±10%. RESISTORS ½ WATT. CAPACITANCE IN MFD'S.
2. ROTARY SWITCHES SHOWN IN FULL CCW POSITION AS VIEWED FROM THE FRONT.
3. ARROW-HEADS INDICATE MAIN SIGNAL PATH.
4. ARROW ON POTENTIOMETER INDICATES CW ROTATION.
5. S1-FUNCTION SWITCH (SRW-44-11)

POSITION	FUNCTION
1	OFF
2	NORMAL
3	SUB CH. FILTER
4	NOISE FILTER

6. S2-METER SWITCH (SRW-33-7)
   1 — SIGNAL STRENGTH
   2 — MULTIPATH
   3 — CENTER TUNING
7. SWITCH FUNCTION
   S1 — FUNCTION
   S2 — METER
   S3 — MUTING
   S4 — MODE
8. FUSE
   F601 — .5 AMP SLO-BLO

HIGHEST SERIES NUMBERS

R4	R104	C405	R605
		D401	C602
		T401	L603
			F601